FIG. 1

TO INK JET HEAD ⇩ 4

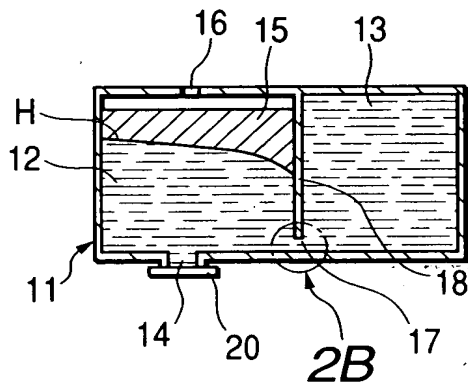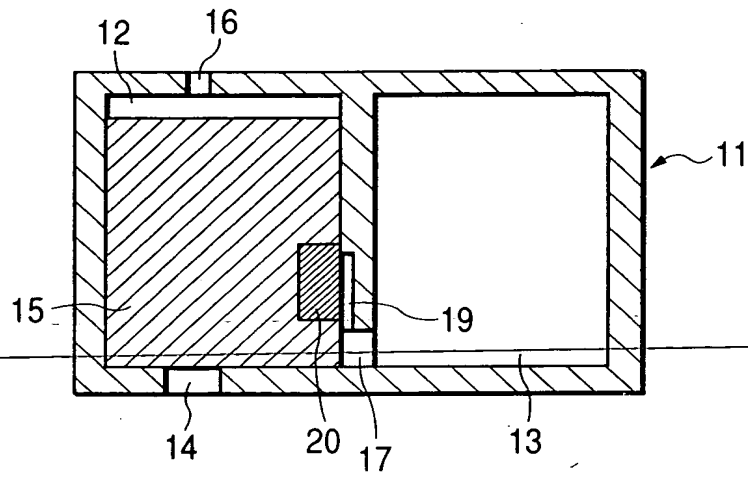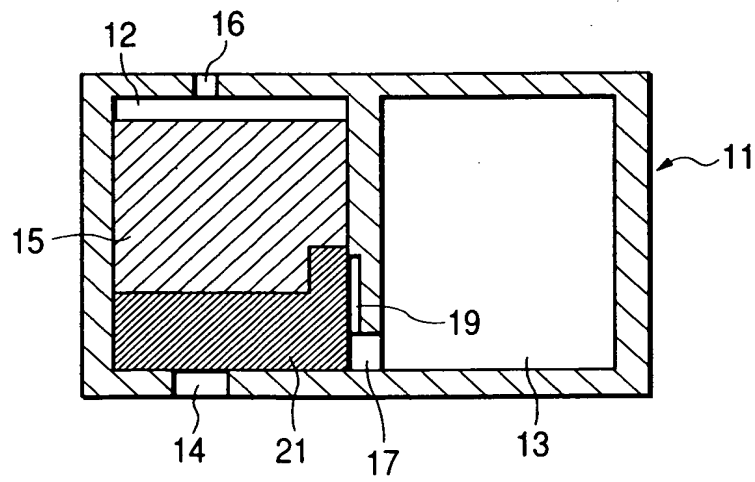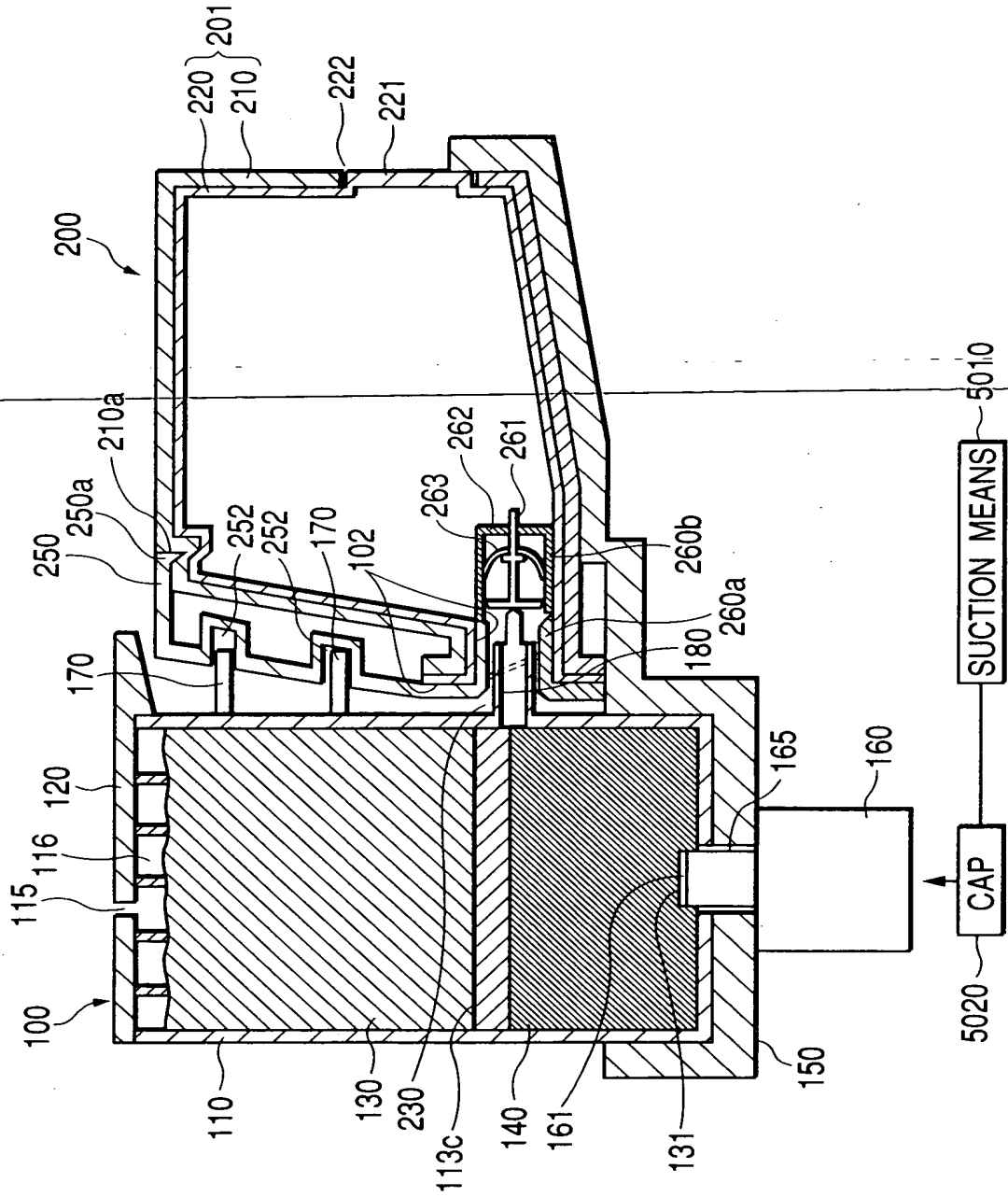# FIG. 2B

FIG. 2A

FIG. 3

FIG. 4

FIG. 5

FIG. 6
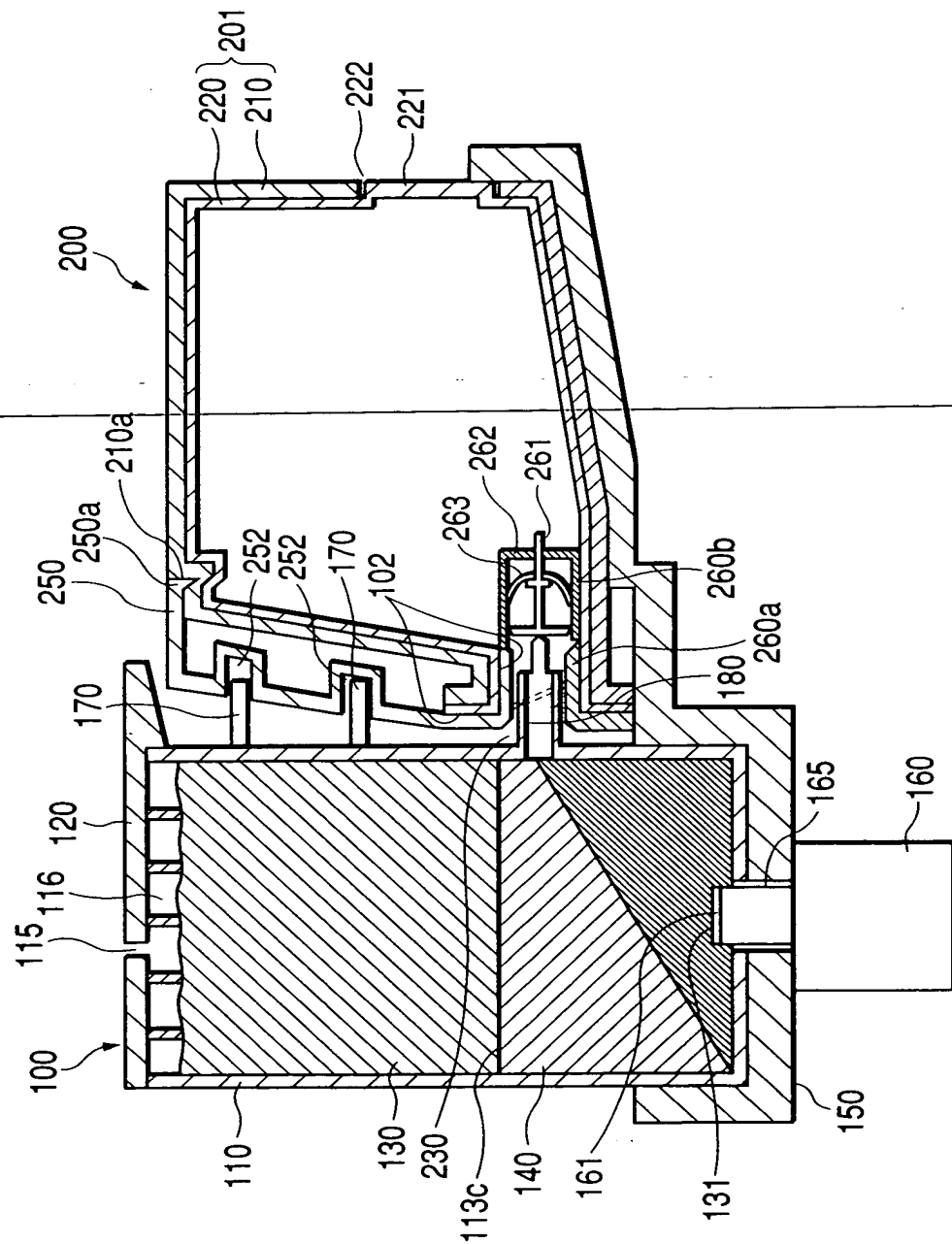
FIG. 7
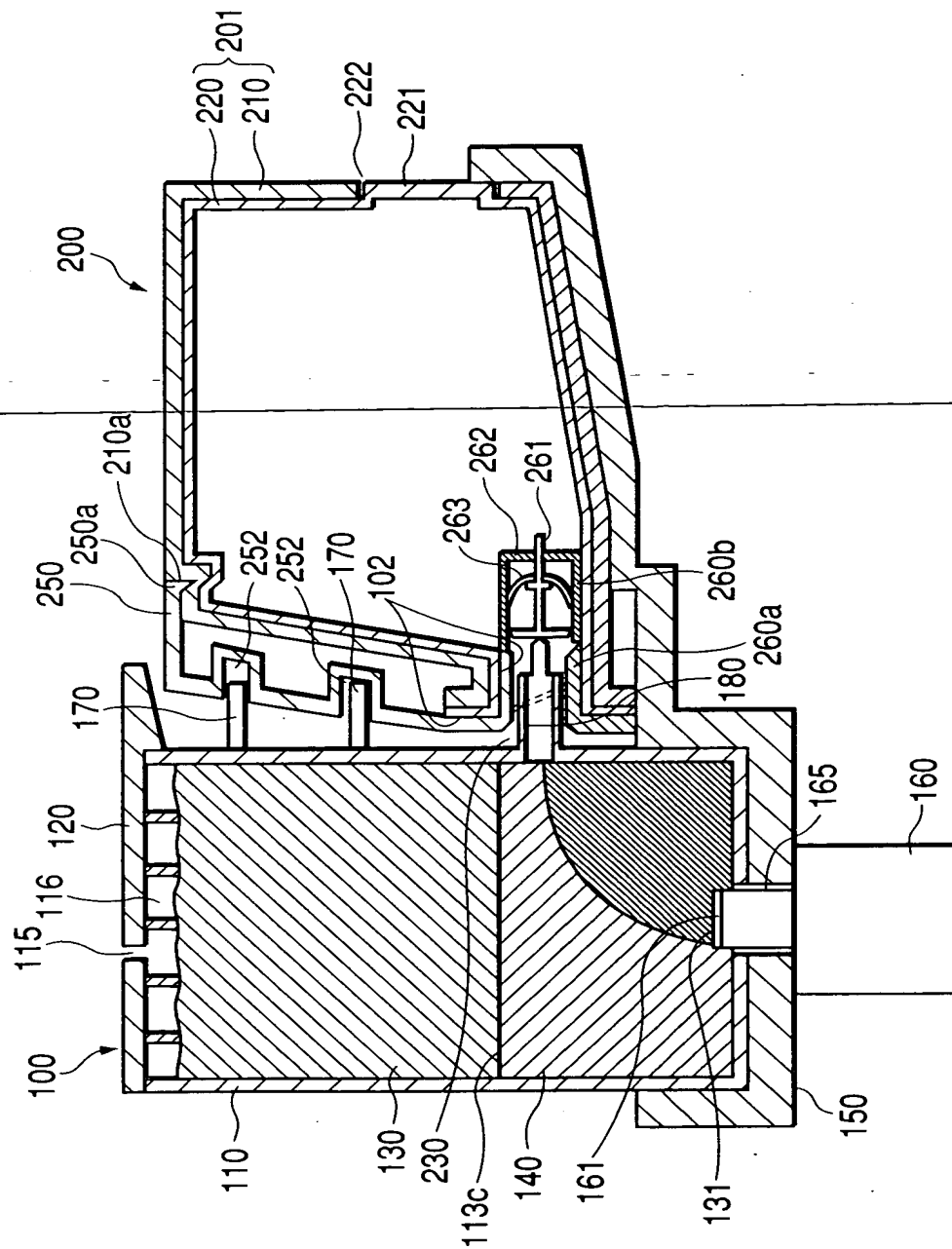
FIG. 8
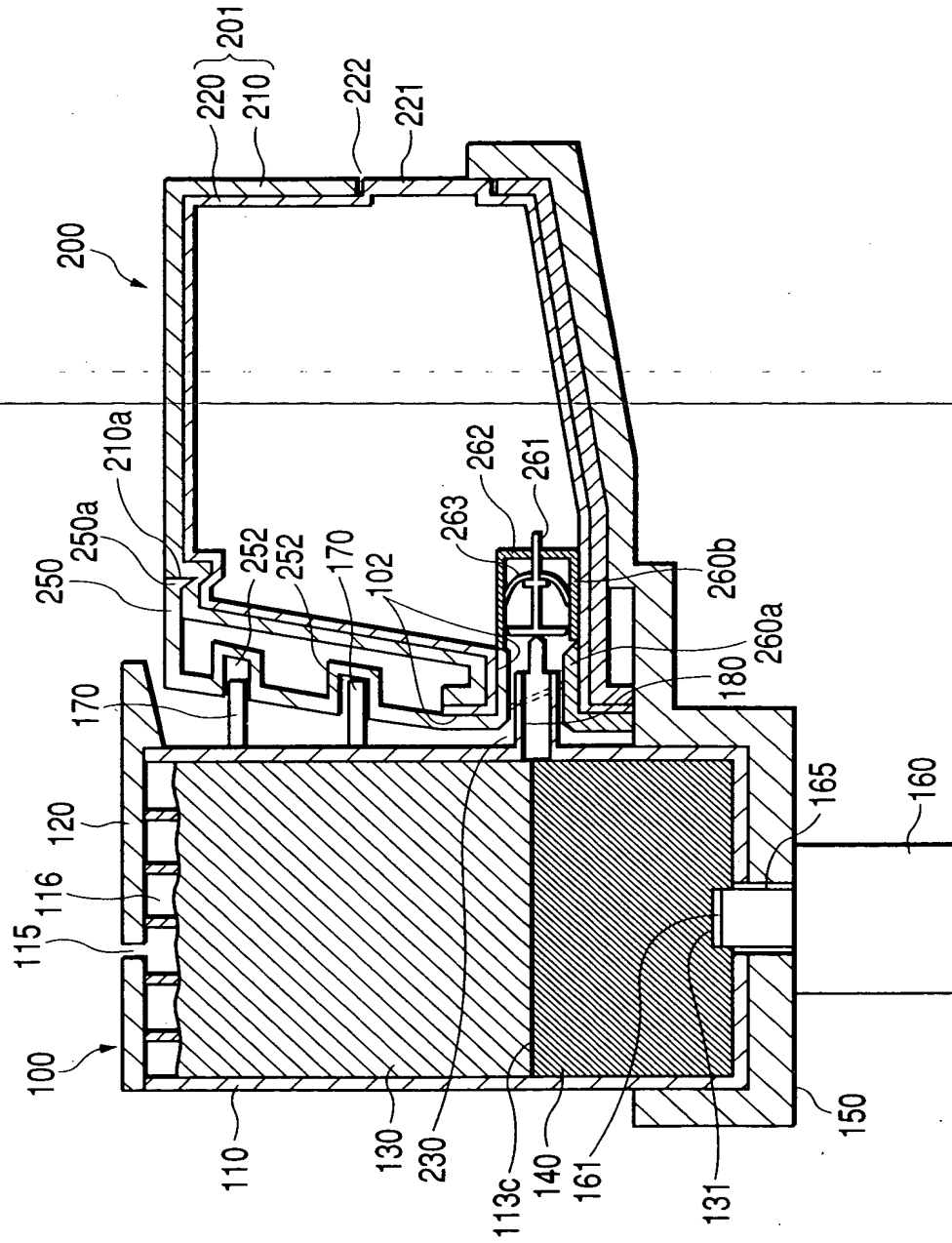
FIG. 9A
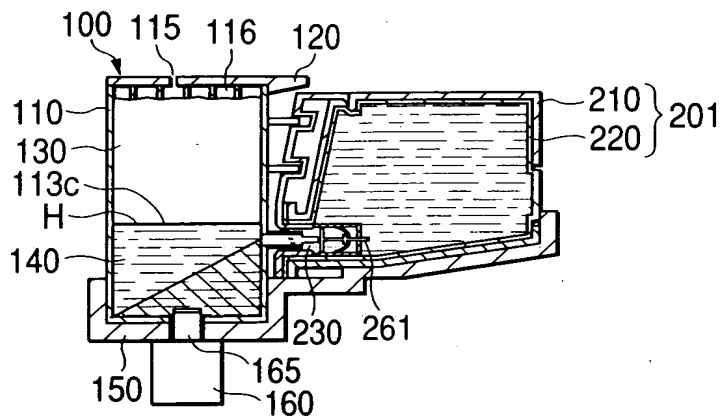
100 115 116 120

110
130
113c
H
140

210
220 } 201

150 165 160

230 261

FIG. 9B

100 115 116 120

H
110
130
113c

140

210
220 } 201

150 165 160

230 261

FIG. 9C

100 115 116 120

110
130
113c
H
140

210
220 } 201

150 165 160

230 261

FIG. 9D

100 115 116 120

110
130
113c

140
H

210
220 } 201
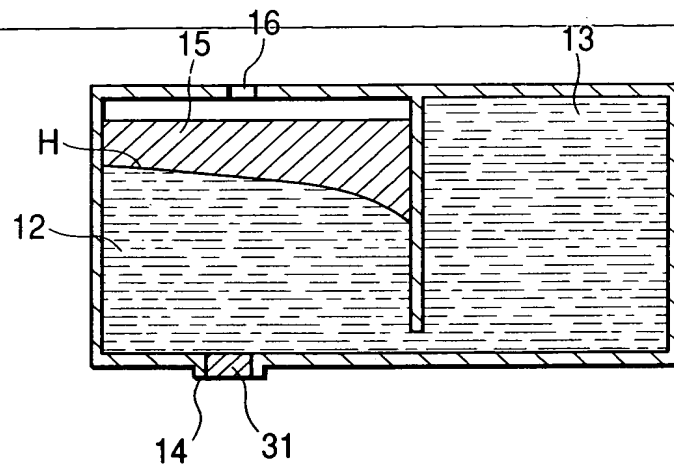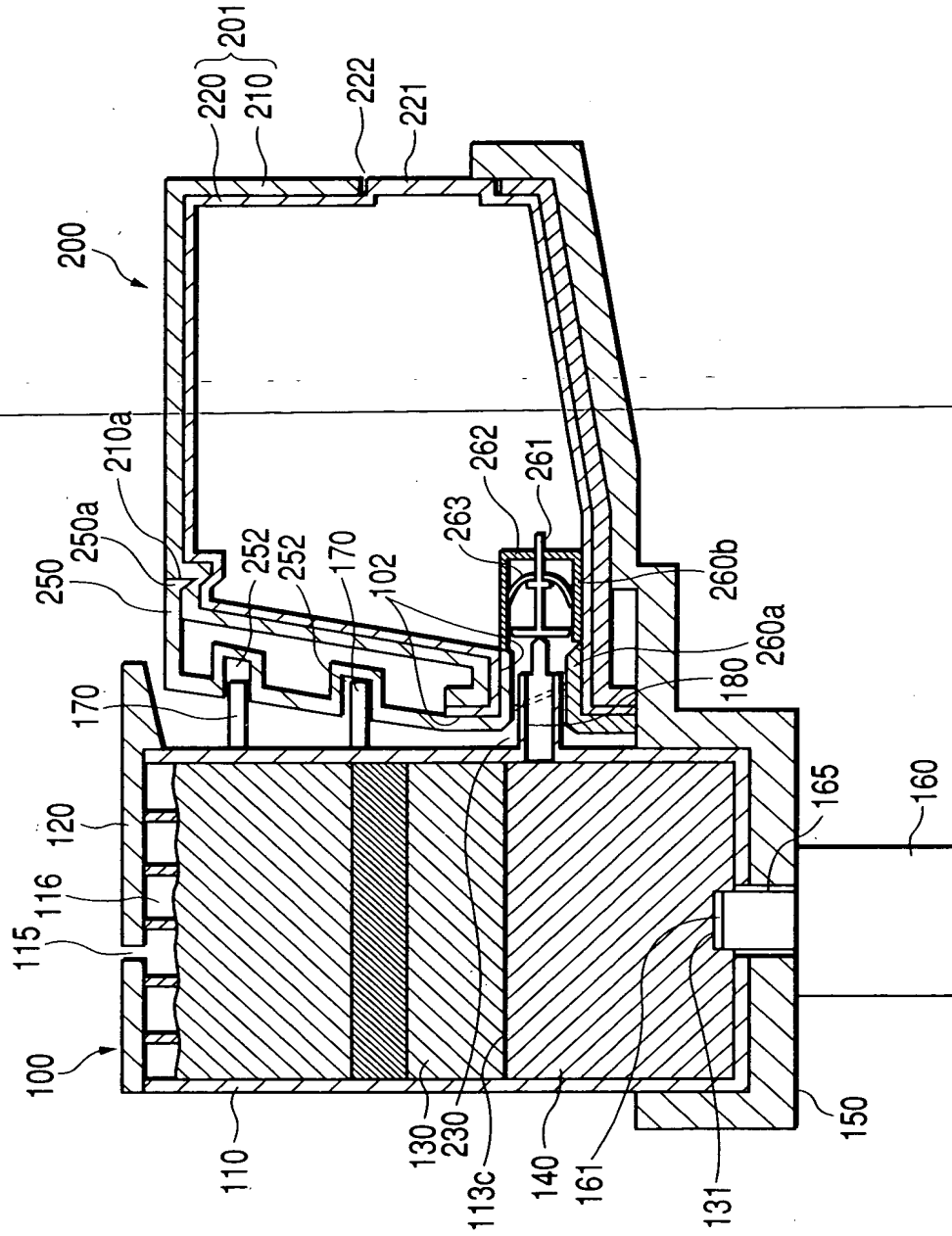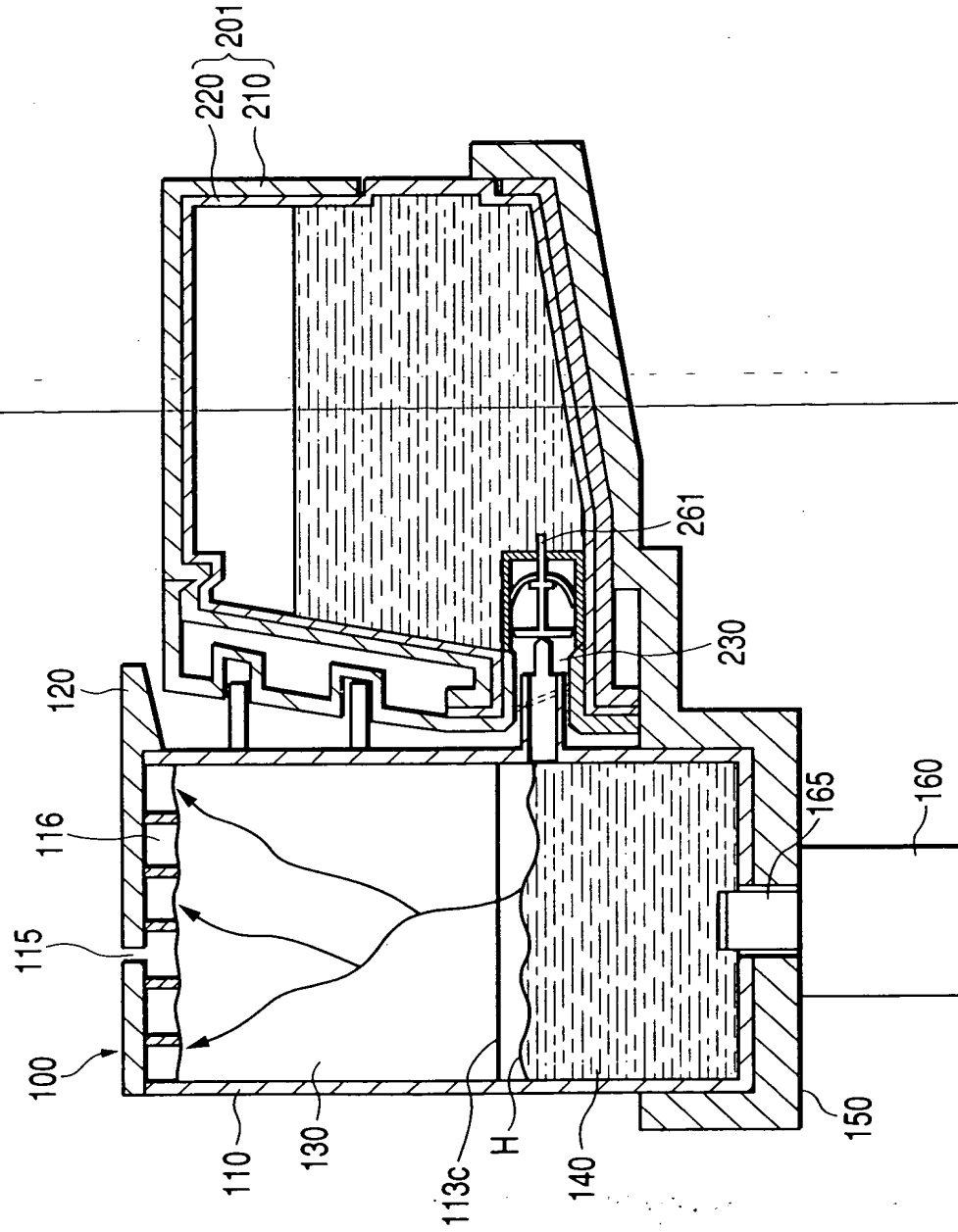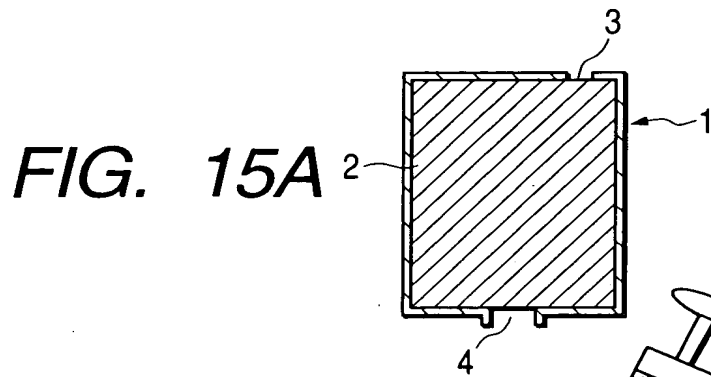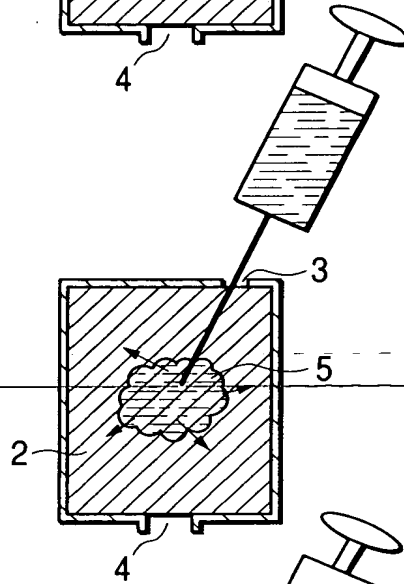
150 165 160

230 261

FIG. 10

130

140

A

180

B

FIG. 11

FIG. 12

FIG. 13

FIG. 14A

FIG. 14B

FIG. 15A

FIG. 15B

FIG. 15C

SUCTION
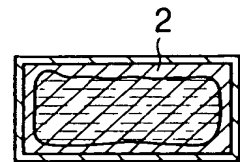
FIG. 15D

FIG. 15E

FIG. 16

IJRA

P

5000

5130

5110

5100

5200

5090

5080

5020

5030

5040

5050

HC

1000
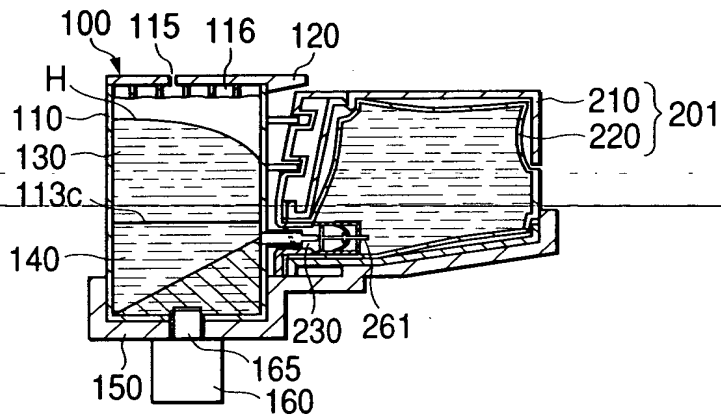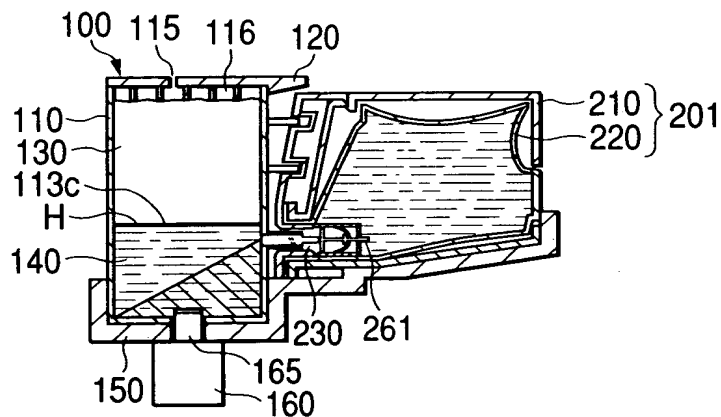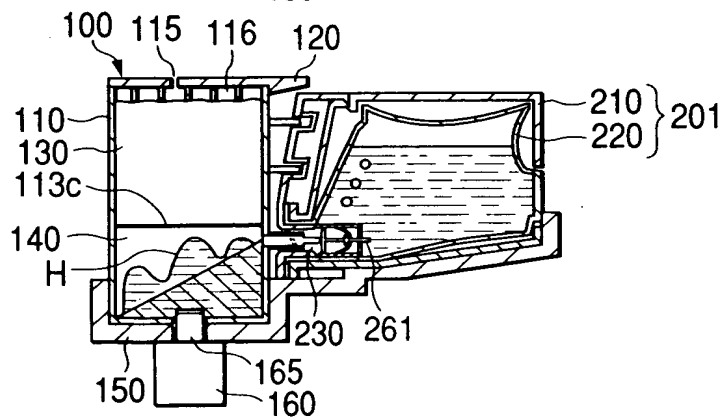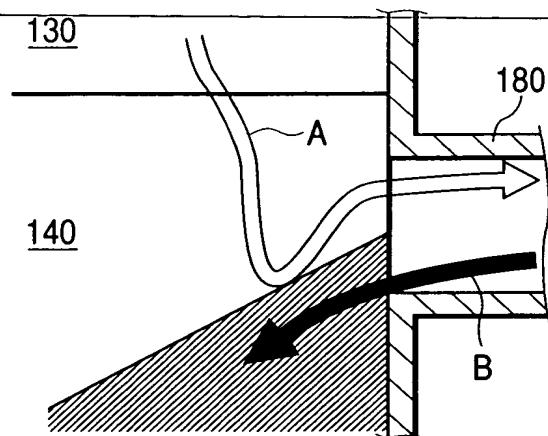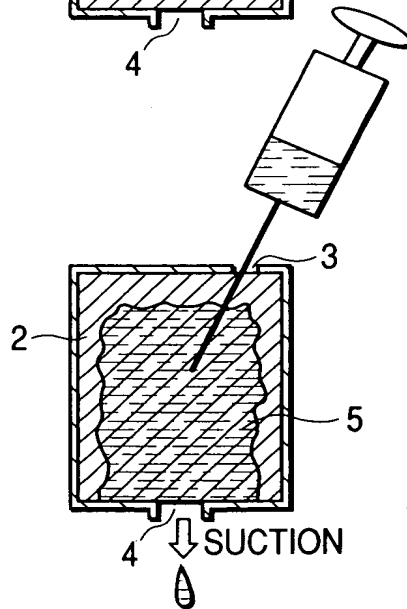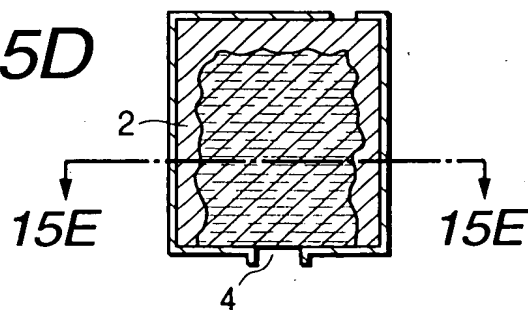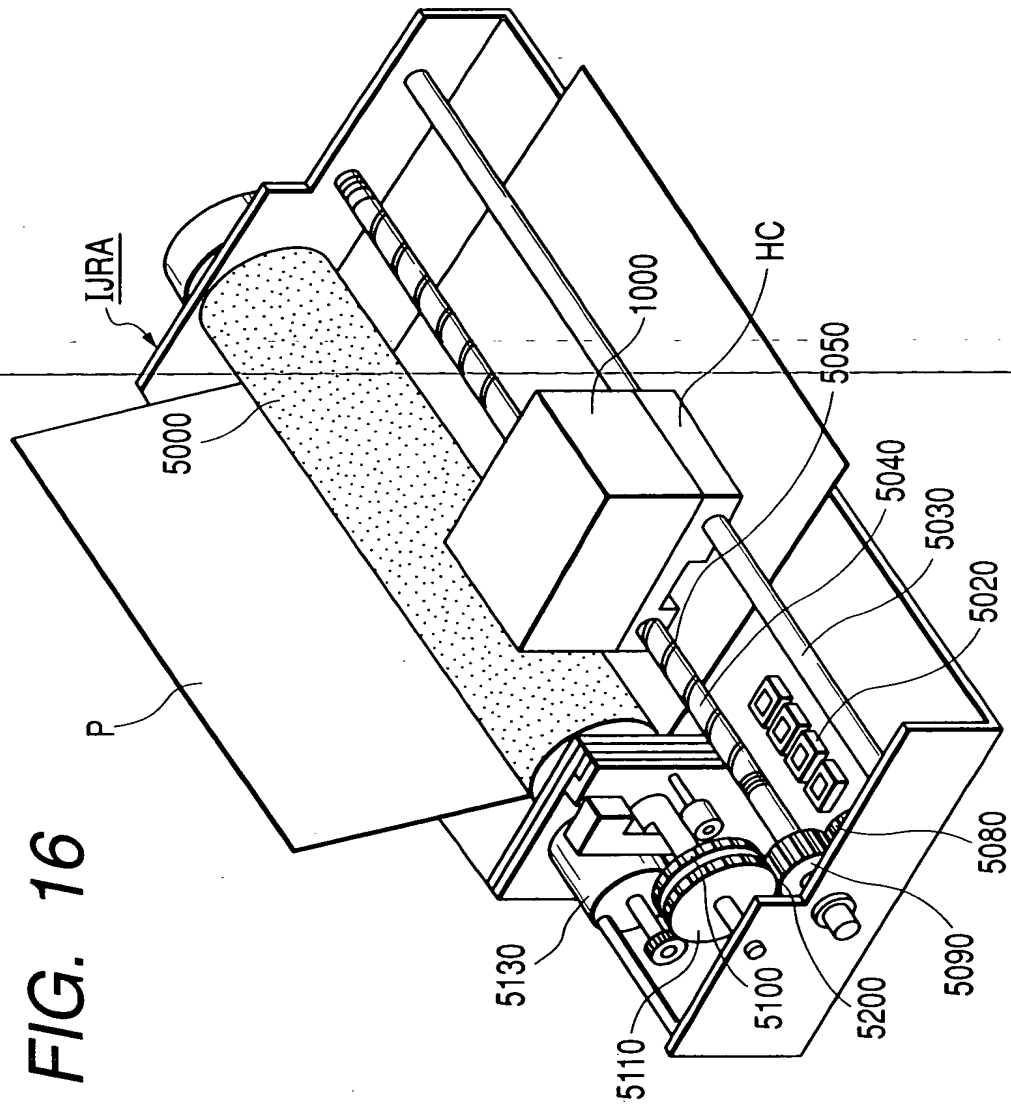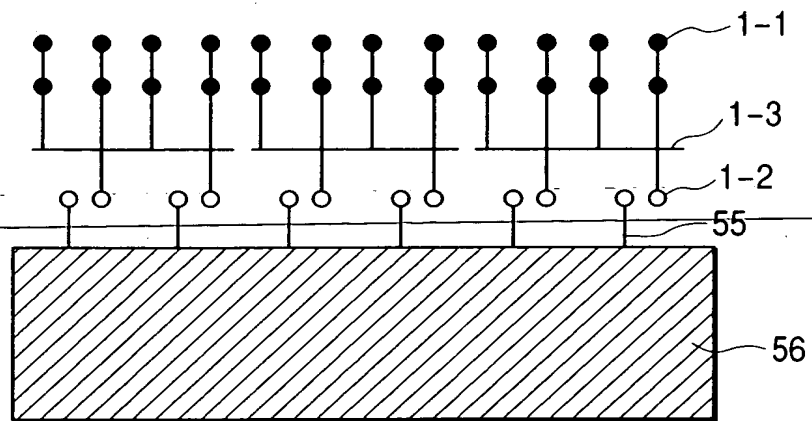
FIG. 17A

FIG. 17B

FIG. 18

FIG. 19
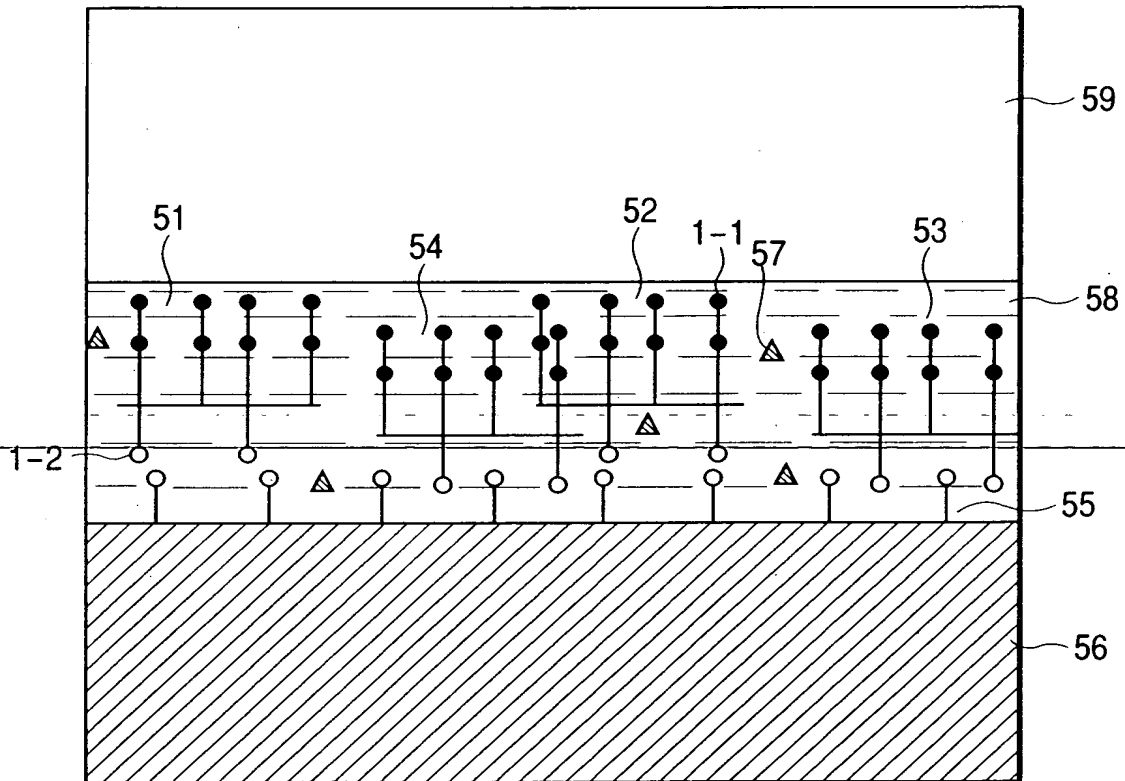
FIG. 20
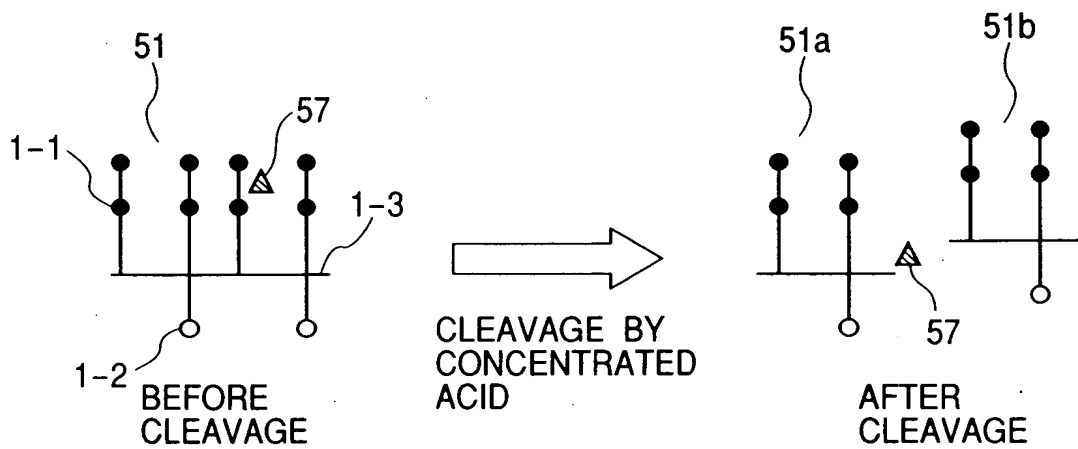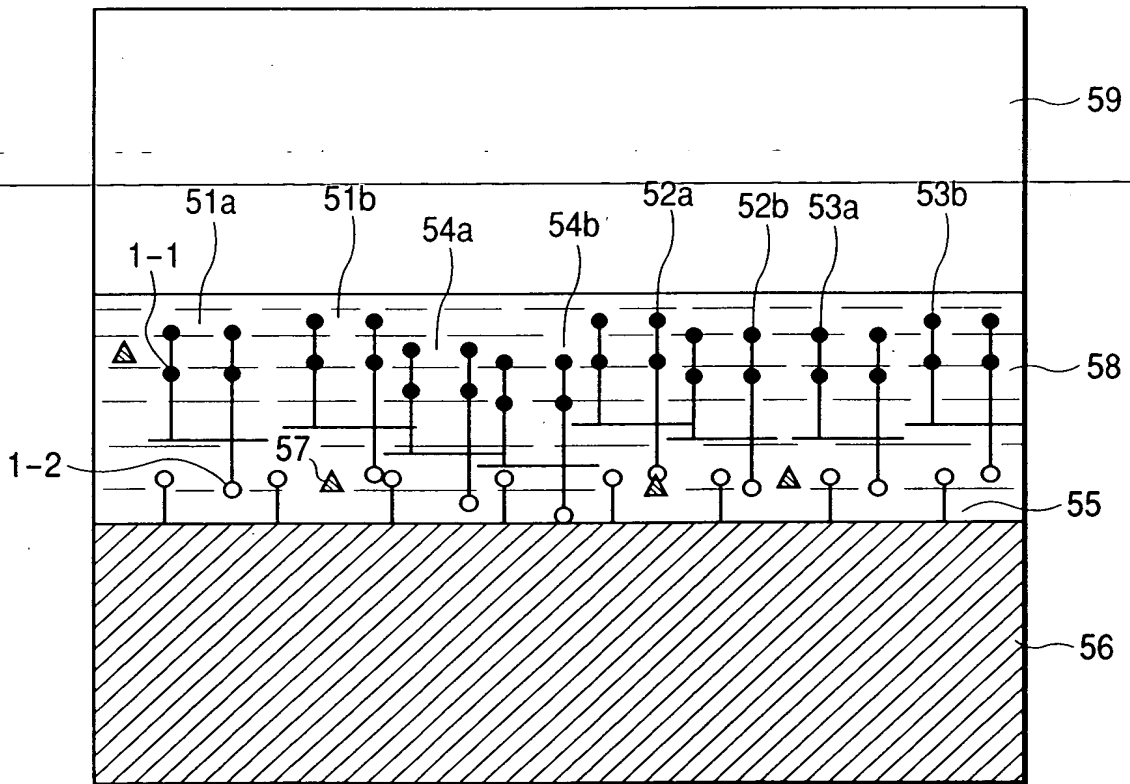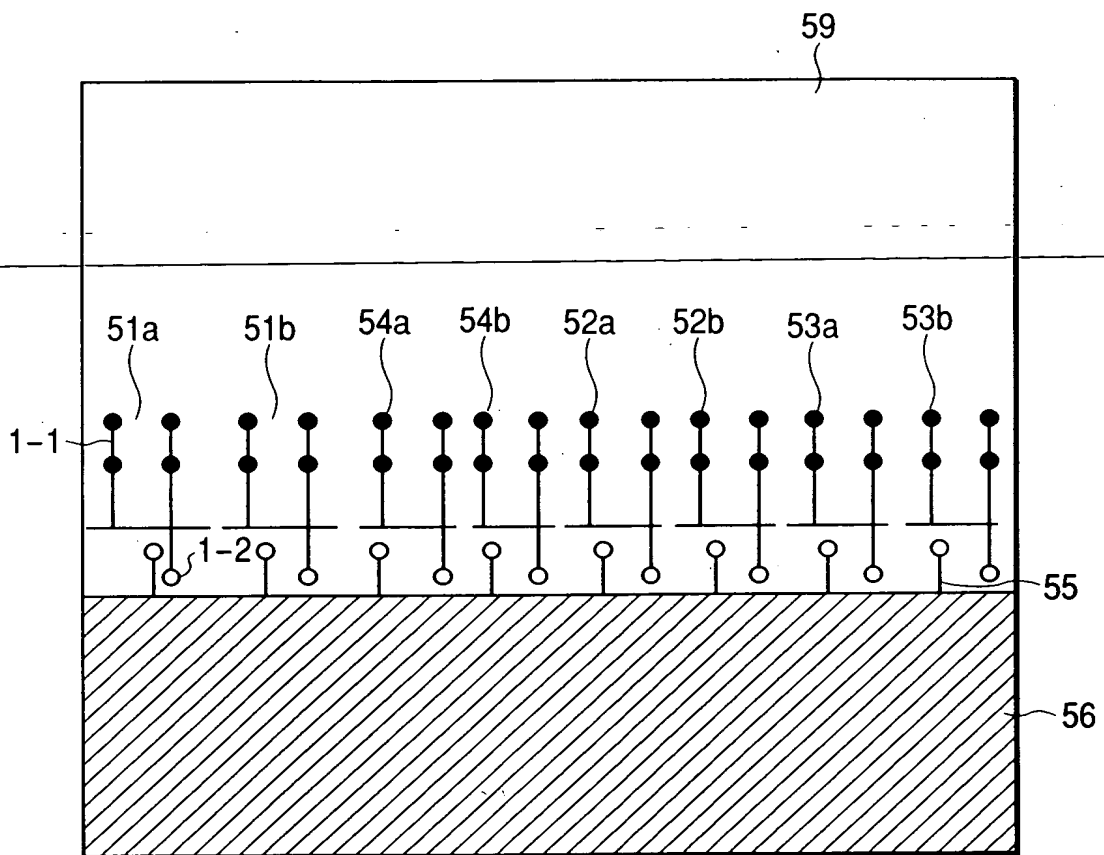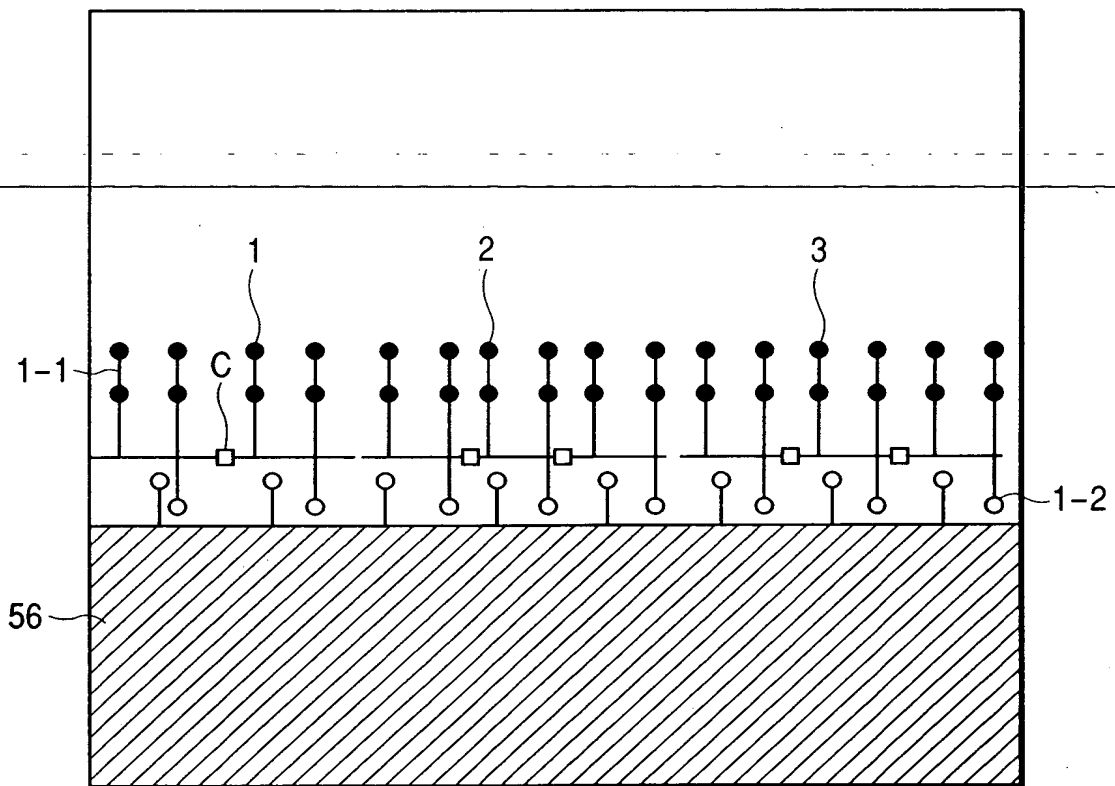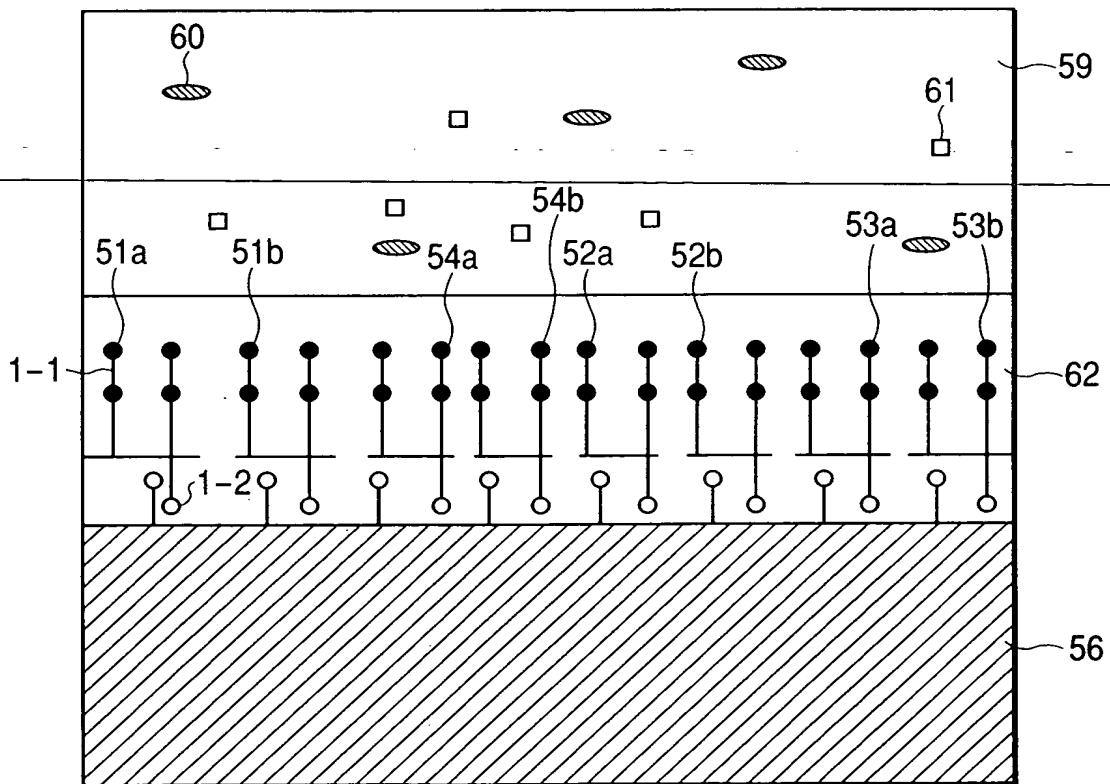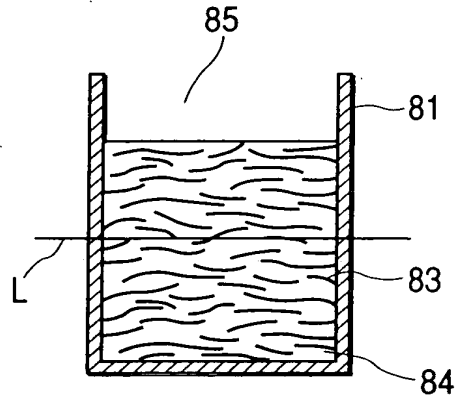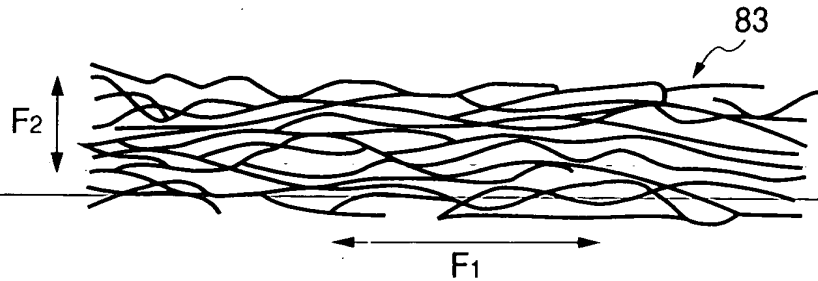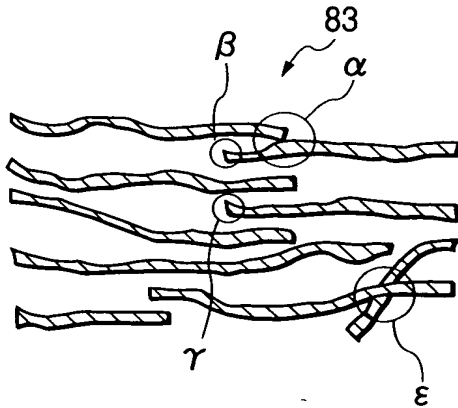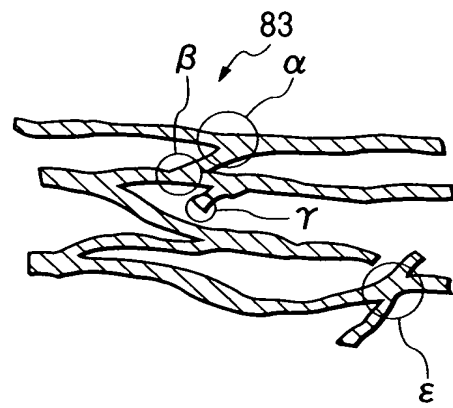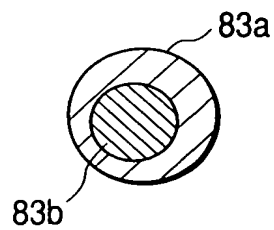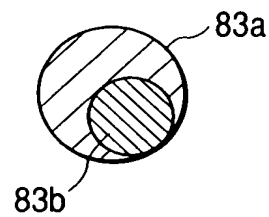
CLEAVAGE BY
CONCENTRATED
ACID

BEFORE
CLEAVAGE

AFTER
CLEAVAGE

FIG. 21

FIG. 22

FIG. 23

FIG. 24

FIG. 25A

85

81

L

83

84

FIG. 25B

83

F2

F1

FIG. 25C

83

β

α

γ

ε

FIG. 25D

83

β

α

γ

ε

FIG. 26A

83a

83b

FIG. 26B

83a

83b

FIG. 27D

FIG. 27A

84

83A

83

FIG. 27E

FIG. 27B

83A

84

83

86

86

FIG. 27F

FIG. 27C

COMPRESS

87

83A

83

87

86

COMPRESS

FIG. 28A

84

FIG. 28B

HEATER

84

60 °C

89

FIG. 28C

84

FIG. 28D

86A

83A

FIG. 28E

86A

83A
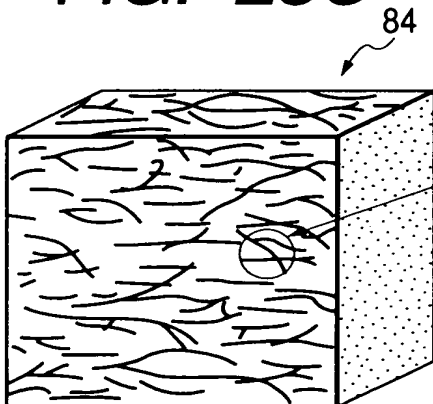
FIG. 28F

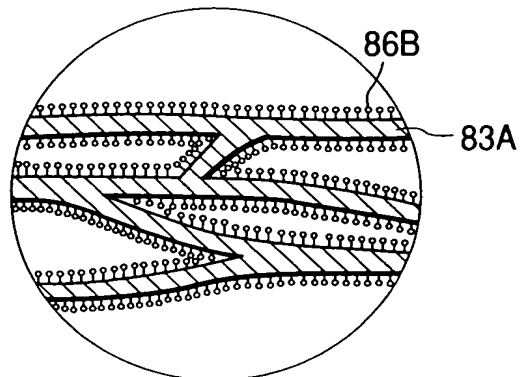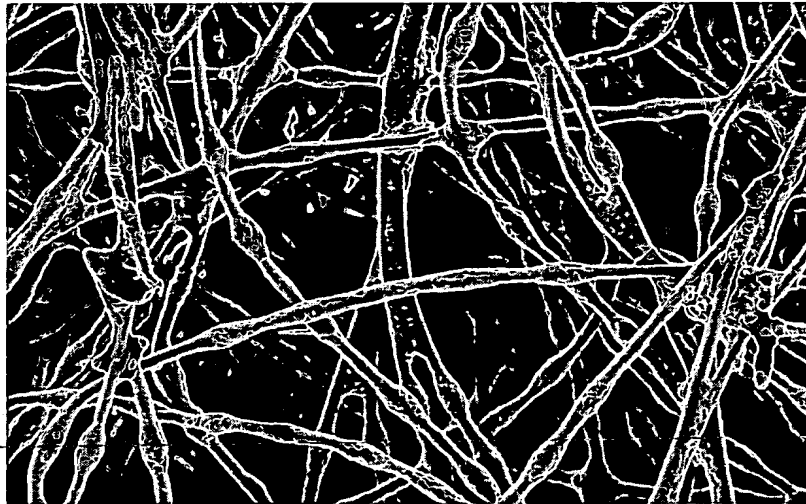86B

83A
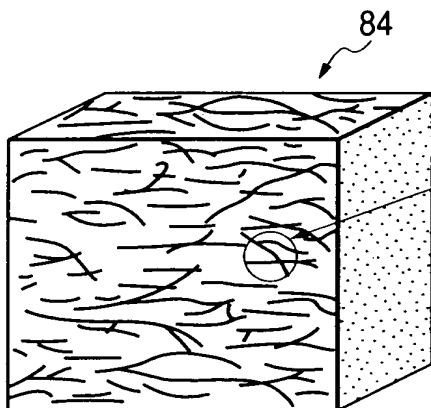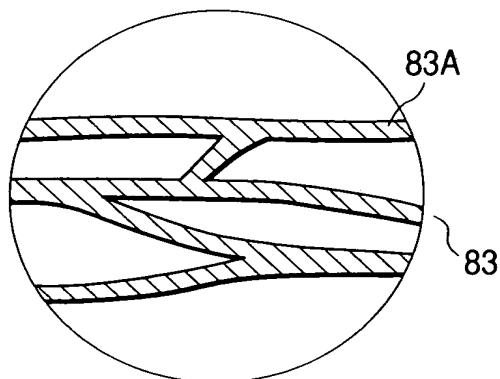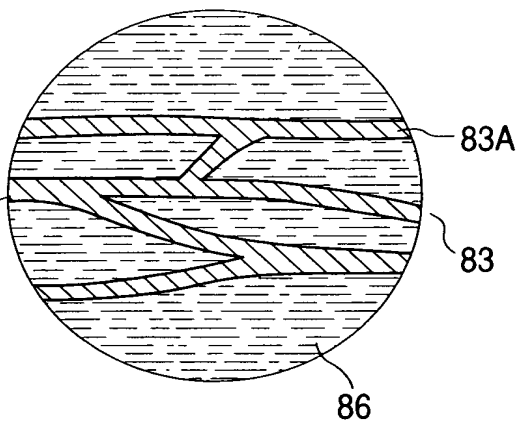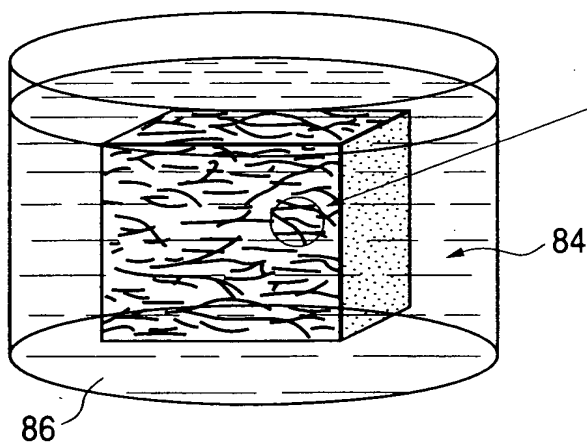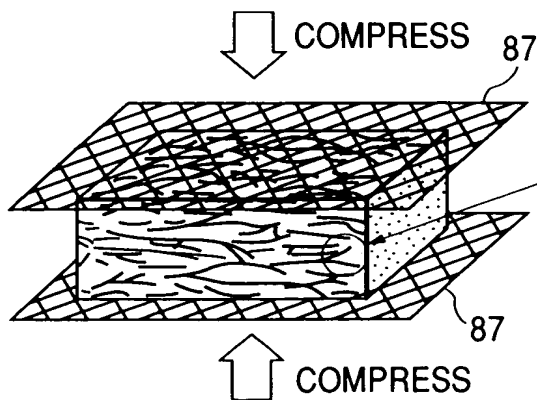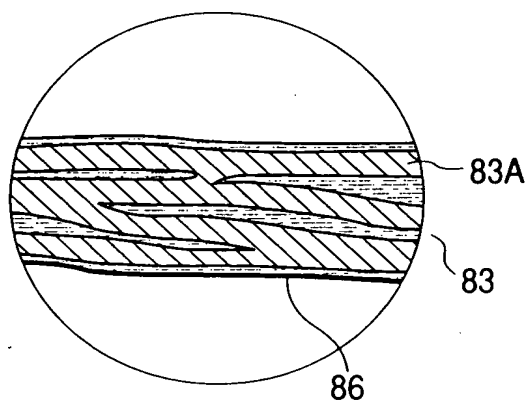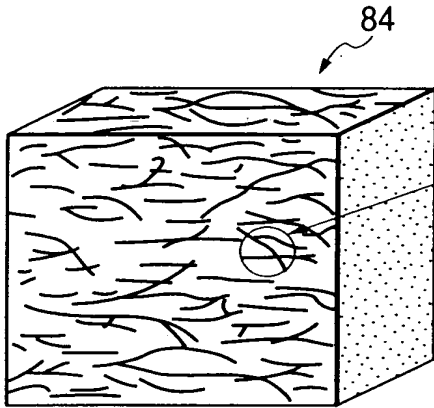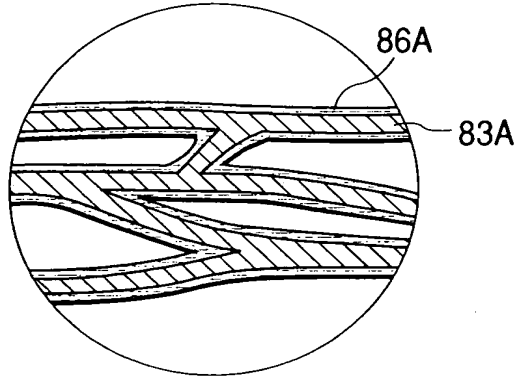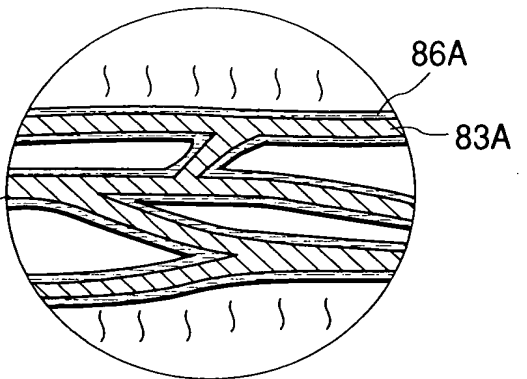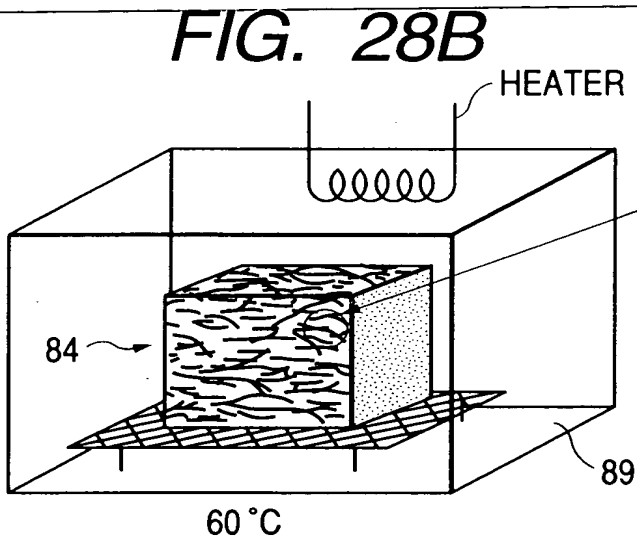
FIG. 29

UNTREATED 150×
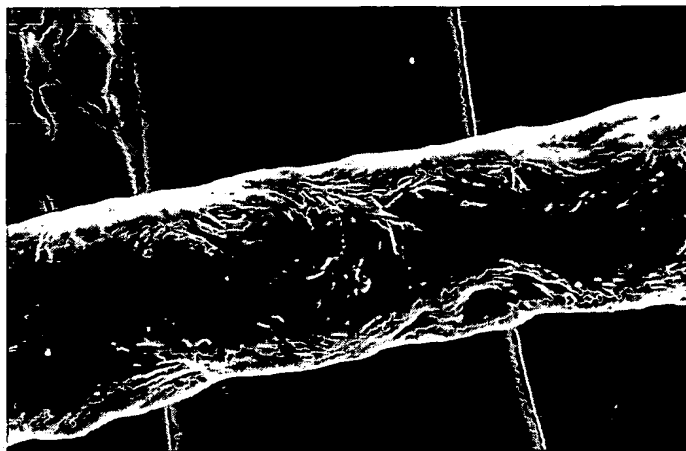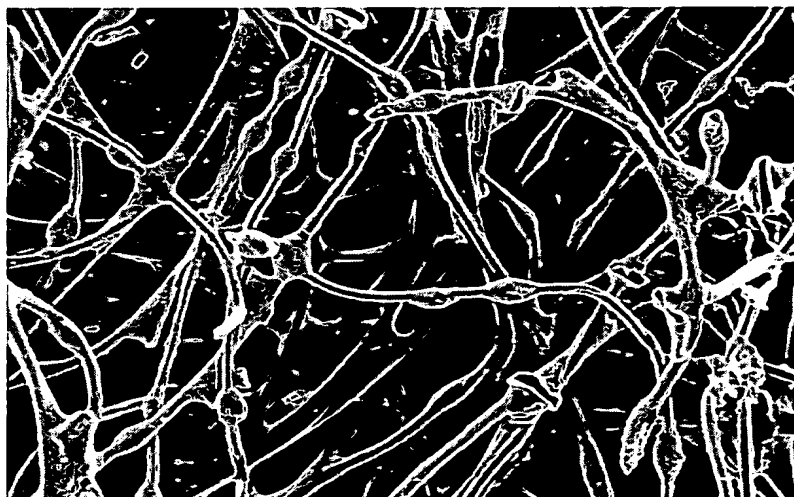
FIG. 30

UNTREATED 500×

FIG. 31

UNTREATED   2000×

FIG. 32

ACIDIZED   150×

FIG. 33

HYDROPHILICALLY TREATED   150×

FIG. 34

HYDROPHILICALLY TREATED   500×

FIG. 35

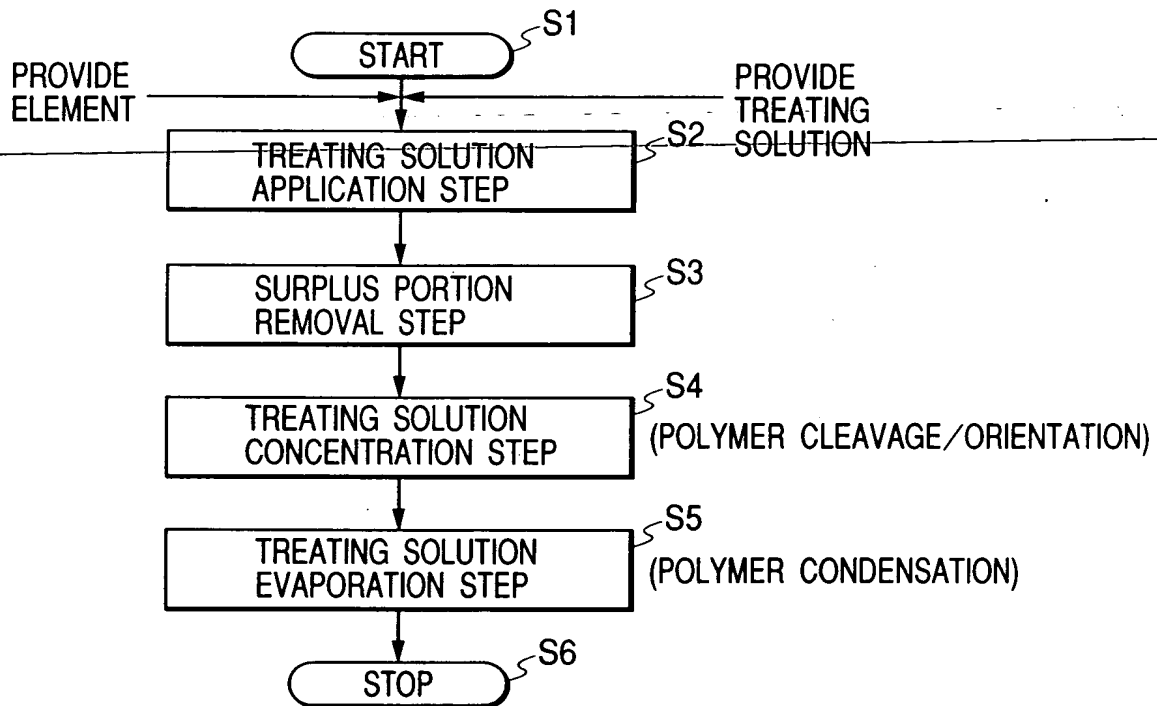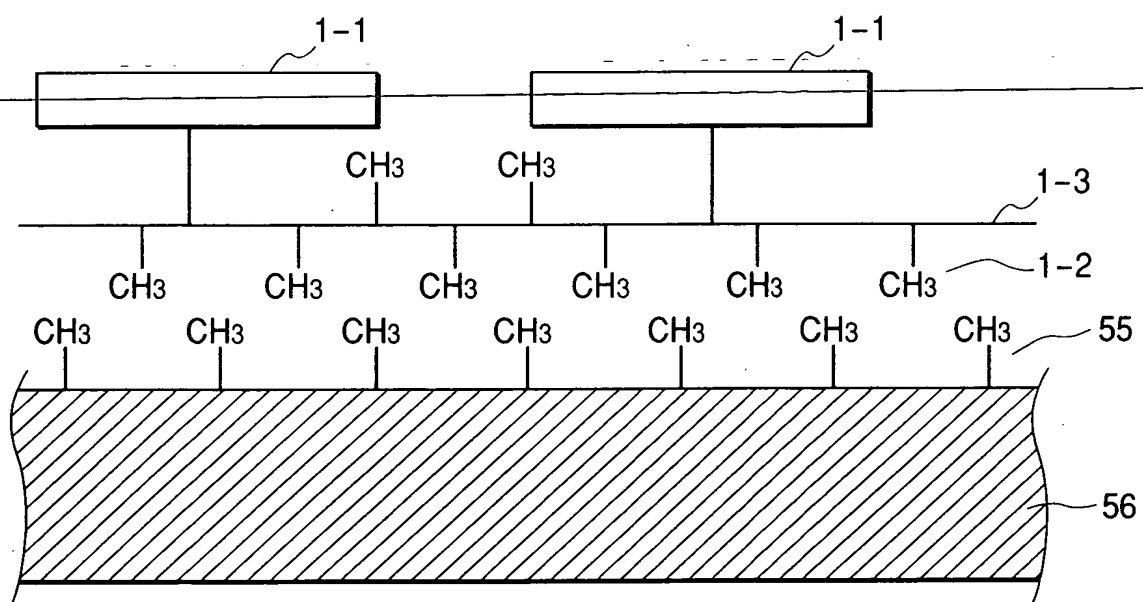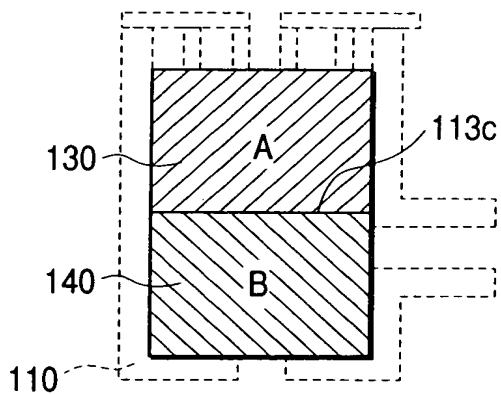HYDROPHILICALLY TREATED 2000×

FIG. 36

START ⟨S1

PROVIDE
ELEMENT

PROVIDE
TREATING
S2 SOLUTION

TREATING SOLUTION
APPLICATION STEP

SURPLUS PORTION
REMOVAL STEP ⟨S3

TREATING SOLUTION
CONCENTRATION STEP ⟨S4

(POLYMER CLEAVAGE/ORIENTATION)

TREATING SOLUTION
EVAPORATION STEP ⟨S5

(POLYMER CONDENSATION)

STOP ⟨S6

FIG. 37

FIG. 38A

FIG. 38B

FIG. 38C
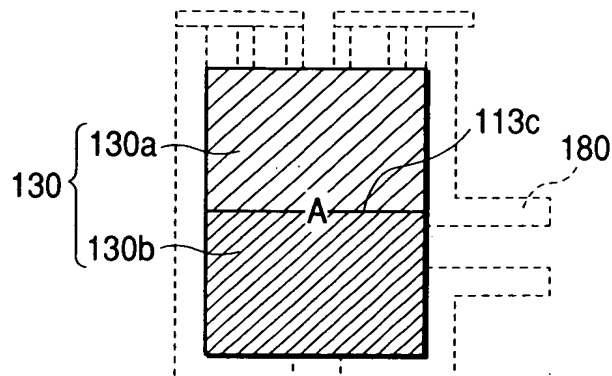
FIG. 39

FIG. 40A

E   D   C   B   A

FIG. 40B

E   D   C   B   A

FIG. 41A

2'

5

FIG. 41B

2'

FIG. 42A

2''

FIG. 42B

2''

FIG. 42C

2''

FIG. 43

FIG. 44A

HOT BLAST

FIG. 44B

HOT BLAST
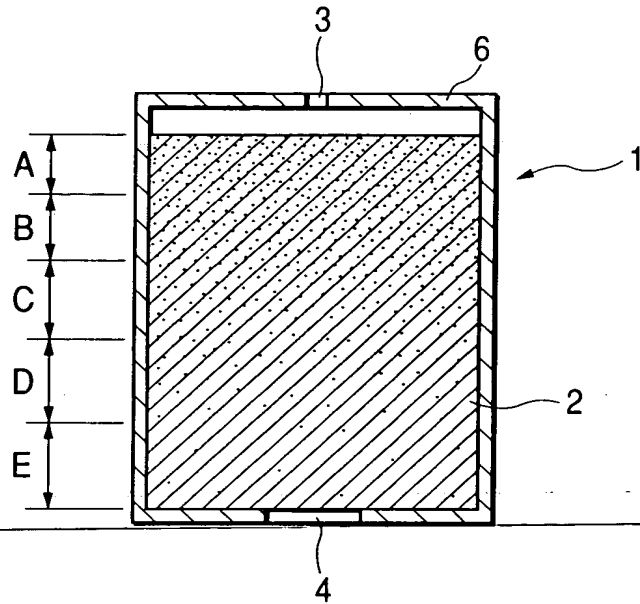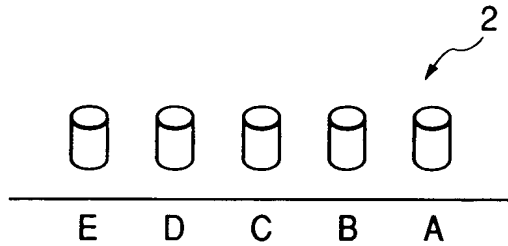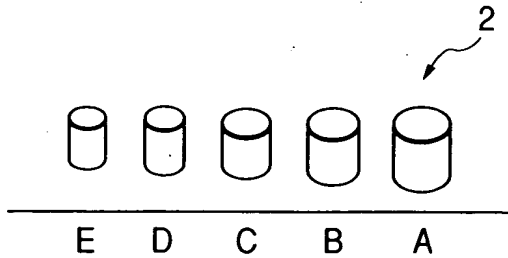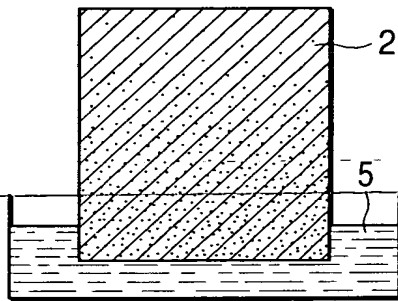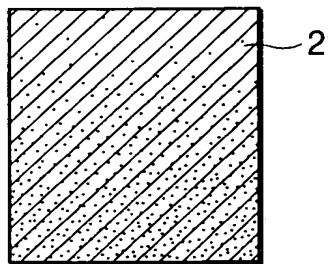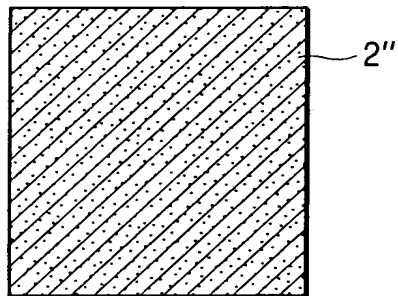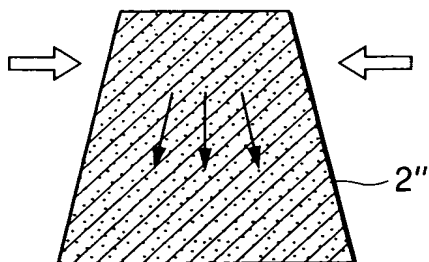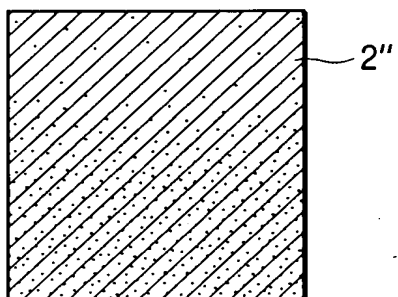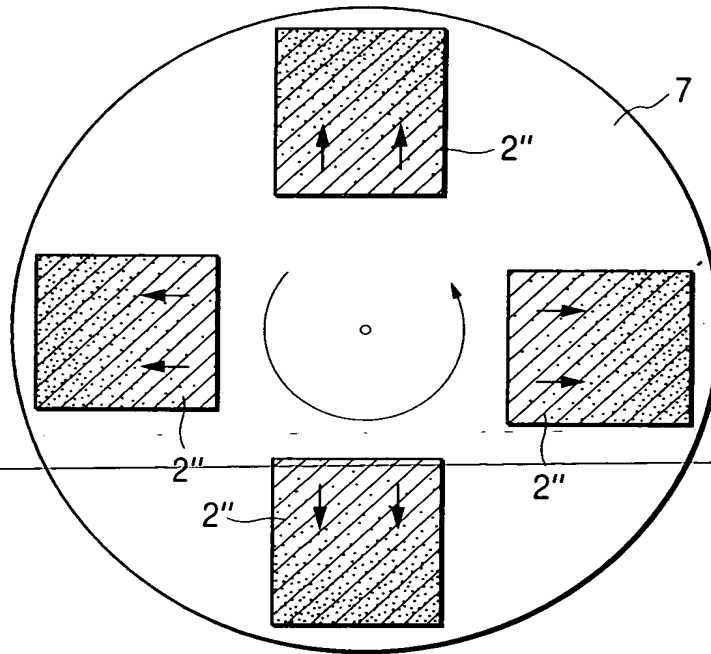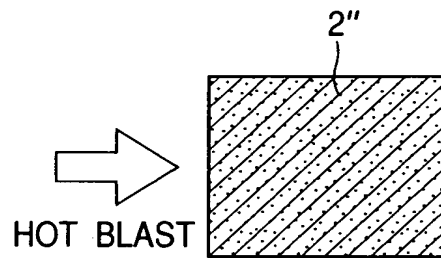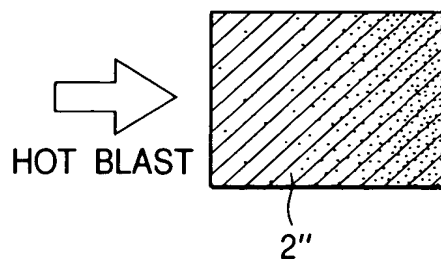
FIG. 45
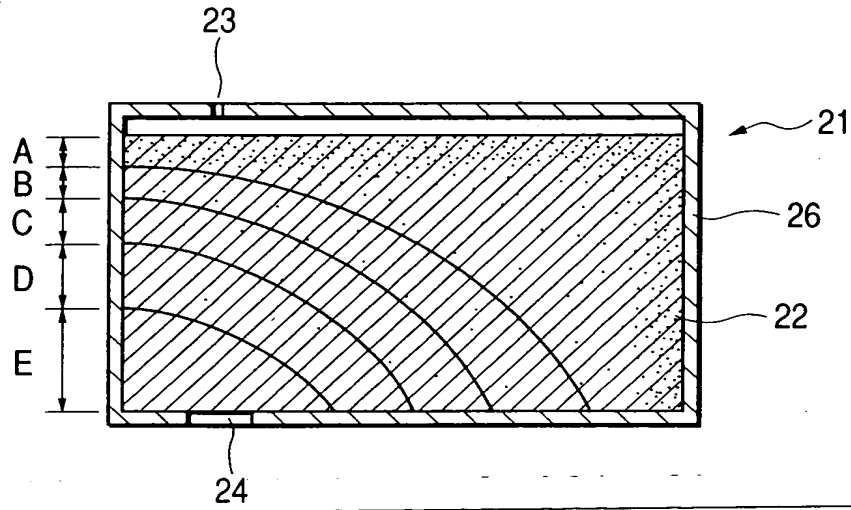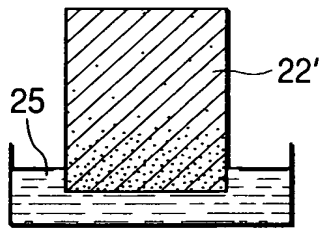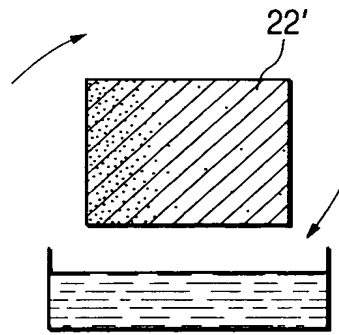
FIG. 46A

FIG. 46B

FIG. 46C
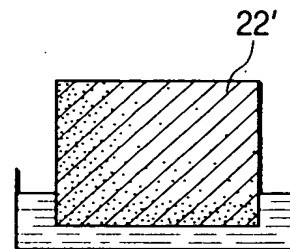
FIG. 47

FIG. 48

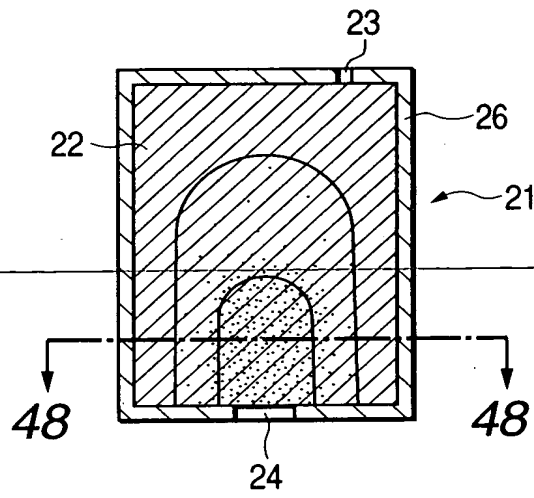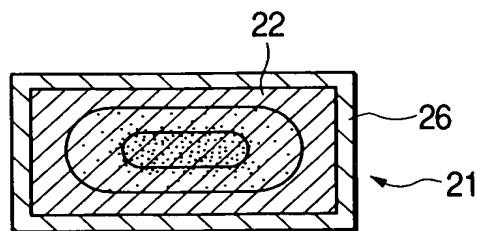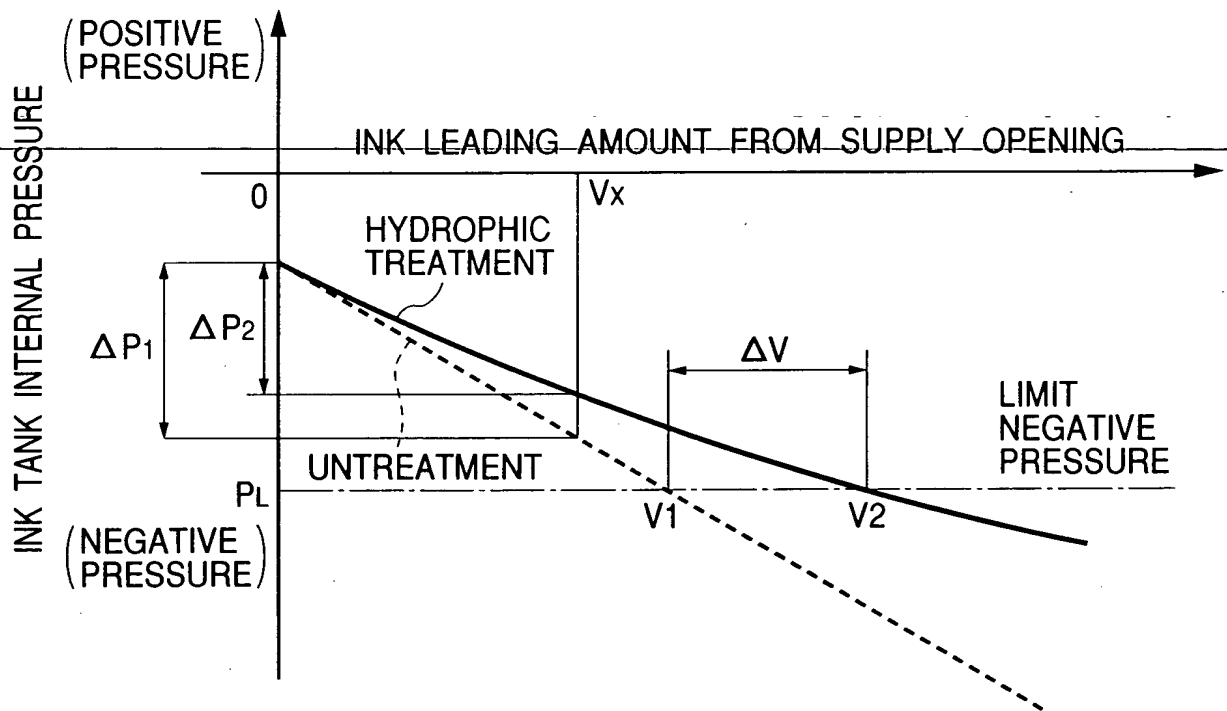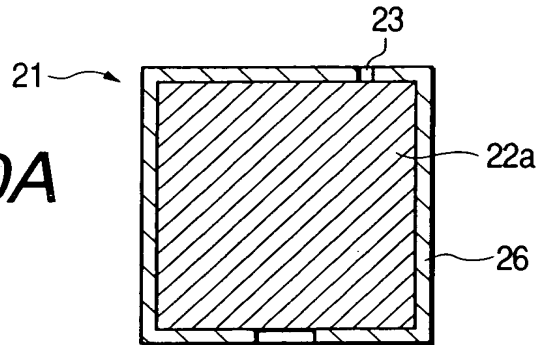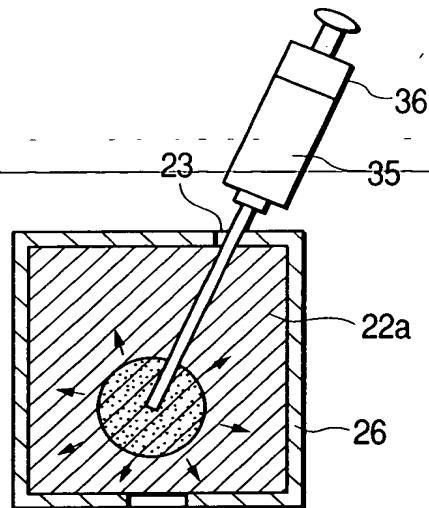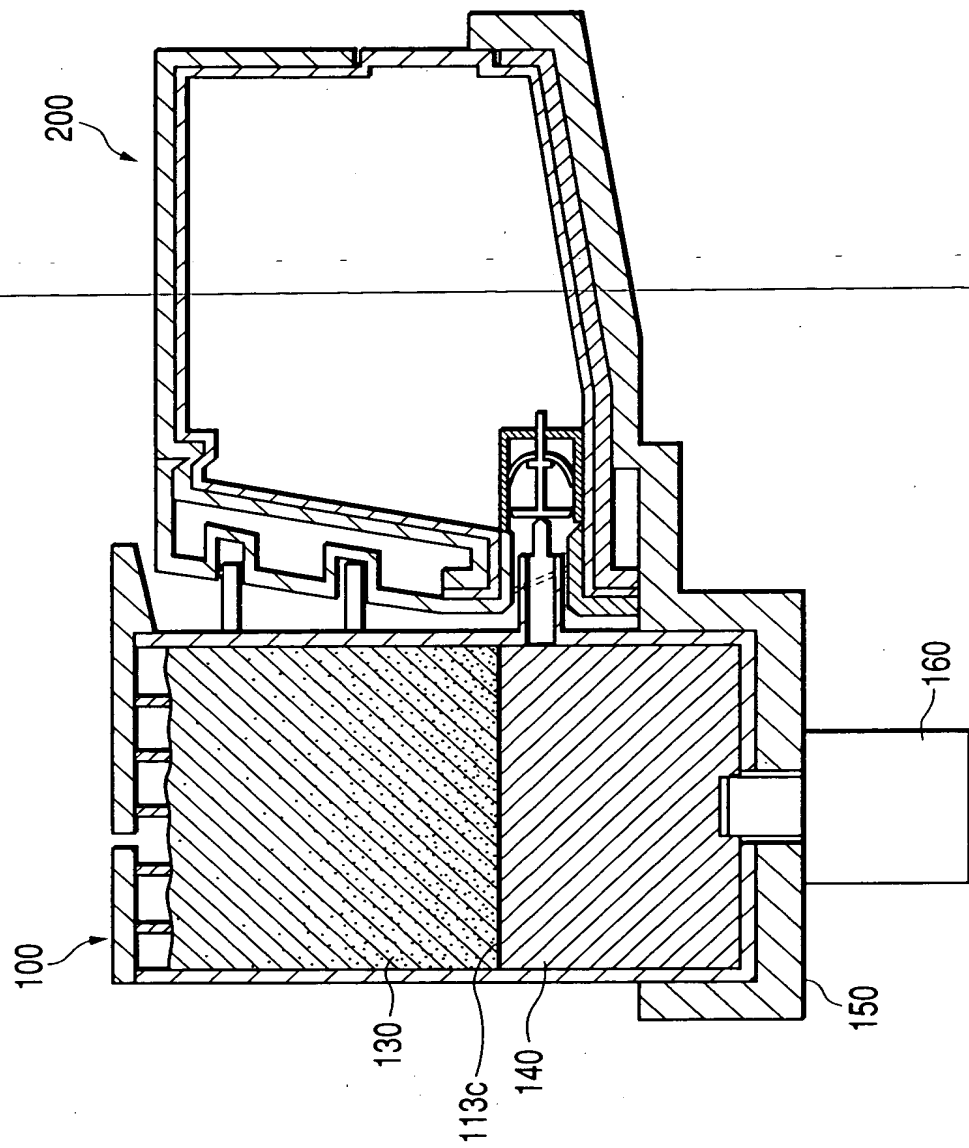# FIG. 49

FIG. 50A

FIG. 50B

FIG. 50C
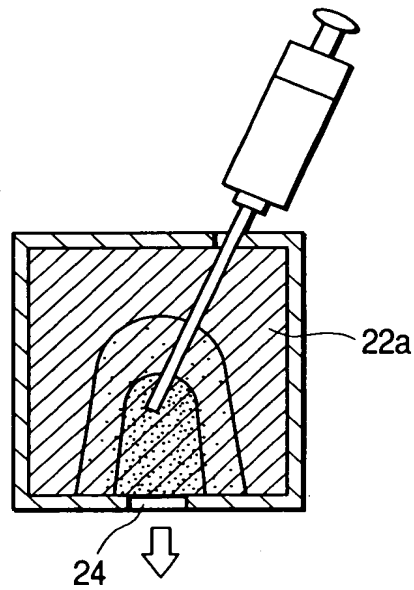
FIG. 51

FIG. 52

FIG. 53

FIG. 54A

22

25

FIG. 54B

FIG. 54D

22

23

22

21

24

FIG. 54C

COLD
BLAST

22

HOT
BLAST

FIG. 54E

23

22

21

24